

R E M A R K S

I. Introduction

In response to the pending final Office Action, Applicants have amended claims 1 and 4 to further clarify the subject matter of the present disclosure. No new matter has been added.

For the reasons set forth below, Applicants respectfully submit that all pending claims as currently amended are patentable over the cited prior art.

II. The Rejection Of Claims 1 And 4-13 Under 35 U.S.C. § 103

Claims 1, 6, 8, 10 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Inoue (USP 5,707,756) in view of Nemoto et al. (USP No. 6,368,750); claims 4-5, 9, 11 and 13 as being unpatentable over Inoue in view of Nemoto and Shoichiro et al. (JP 2002-319398); and claim 7 as being unpatentable over Inoue in view of Nemoto and further in view of Fernandez et al. (USP No. 5,637,413). Applicants respectfully traverse these rejections for at least the following reasons.

With regard to the present disclosure, independent claims 1 and 4 recite, in-part, a non-aqueous electrolyte secondary battery comprising a positive electrode material mixture layer which comprises a positive electrode active material comprising a lithium transition metal composite oxide, wherein the lithium transition metal composite oxide is represented by the general formula (1):  $\text{Li}_x\text{Co}_{1-y}\text{M}_y\text{O}_2$ , the general formula (1) satisfies  $1.0 \leq x \leq 1.03$  and  $0.005 \leq y \leq 0.15$ , the element M in the general formula (1) is at least two selected from the group consisting of Mg, Al, Sr, Mn, Ni and Ca.

One feature of the present disclosure is that the lithium composite oxide being represented by the general formula (1):  $\text{Li}_x\text{Co}_{1-y}\text{M}_y\text{O}_2$  is used as the positive electrode active

material, where M is at least two selected from the group consisting of Mg, Al, Sr, Mn, Ni and Ca. As is shown in Tables 1-6 of the specification, all of the battery examples 1-41 and 43 are comprised of a positive electrode active material in which M is at least two selected from the group consisting of Mg, Al, Sr, Mn, Ni and Ca.

It is admitted in the Office Action that Inoue fails to disclose a lithium composite oxide having at least two of the elements selected from the above-claimed group. Moreover, Nemoto fails to remedy this deficiency. As is shown in the Abstract of Nemoto, the lithium transition metal compound has a formula  $\text{LiM}_z\text{Me}_{N-z}\text{O}_y$ , where M = Me. However, for all of the compounds in the Examples shown in Tables 1-5, the compounds that do have a second compound, all of them contain Ti, which is not in the list of compounds recited in amended claims 1 and 4 of the present disclosure. As such, Nemoto does not disclose lithium composite oxide being represented by the general formula (1):  $\text{Li}_x\text{Co}_{1-y}\text{M}_y\text{O}_2$  is used as the positive electrode active material, where M is at least two selected from the group consisting of Mg, Al, Sr, Mn, Ni and Ca.

In order to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. As Inoue and Nemoto, at a minimum, fail to disclose a non-aqueous electrolyte secondary battery comprising a positive electrode material mixture layer which comprises a positive electrode active material comprising a lithium transition metal composite oxide, wherein said lithium transition metal composite oxide is represented by the general formula (1):  $\text{Li}_x\text{Co}_{1-y}\text{M}_y\text{O}_2$ , said general formula (1) satisfies  $1.0 \leq x \leq 1.03$  and  $0.005 \leq y \leq 0.15$ , the element M in the general formula (1) is at least two selected from the group consisting of Mg, Al, Sr, Mn, Ni and Ca, it is submitted that Inoue and Shoichiro do not render claims 1 and 4 obvious. Accordingly, claims 1 and 4 are allowable and as such, it

is respectfully requested that the § 103 rejection of claims 1 and 4, and any pending claims dependent thereon be withdrawn.

**III. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 4 are patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

**IV. Conclusion**

Having responded to all open issues set forth in the Office Action, it is respectfully submitted that all claims are in condition for allowance.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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